Productive Pinning: A Quantitative Content Analysis Determining the Use of Pinterest by Agricultural Businesses and Organizations

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In recent years social media sites have experienced rapid growth among users, specifically the image-based site Pinterest. The purpose of this study was to investigate how agricultural producers and businesses were using Pinterest. A sample of 428 Pinterest users were evaluated using a quantitative content analysis to determine basic information about how Pinterest was used and the presence of four possession rituals: personalizing, claiming, sharing, and storing and hoarding. The research objectives of this study included (1) determining the number of businesses and organizations using Pinterest, (2) identifying what possession rituals are most prominently utilized by agribusinesses and agricultural organizations on Pinterest, and (3) determining what segment of the agricultural industry is represented on Pinterest the most. The results indicated agricultural producers and businesses are utilizing Pinterest but progress is still warranted. More specif ically, the results revealed agriculture's use of Pinterest is highly personalized, with the most room for improvement being in the area of sharing content agriculturists generate themselves.

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Key Words

Pinterest, social media, advocacy, possession rituals, agri-marketing

Introduction

Social media sites and the Internet are effective tools for sharing information and creating lasting relationships with consumers (Graybill-Leonard, Meyers, Doerfert, & Irlbeck, 2011); however, the agricultural community is less than effective in implementing such strategies to reach mass-media coverage (Ruth-McSwain & Telg, 2008). Much interest exists in implementing social media advocacy campaigns by younger generations of farmers and ranchers. This group believes if they do not fight for their industry now, it will be their children who are adversely affected by agriculture's inability to successfully advocate (Graybill-Leonard et al.).

Many agriculturists want to create a social movement to cause a change in their society's perception of agriculture (Graybill-Leonard et al., 2011). By creating a mixed-media strategy with an identifiable target market, it is likely the positive coverage of agriculture will increase in the media and in social movements (Ruth-McSwain & Telg, 2008).

The lack of a strong and coordinated network of agricultural advocates is a considerable weakness in mobilizing messages to impact social change and political action (Holt-Giminez, 2010). As such, in today's social media environment, farmers and ranchers who are not integrating successful online advocacy campaigns in addition to grassroots campaigns to improve their public image are putting their organizations and industry at a tremendous disadvantage (Meyers, Irlbeck, Graybill-Leonard, & Doerfert, 2011). Some agricultural producers have begun utilizing social media as a

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way to improve direct-to-consumer marketing, which can lead to both non-financial and financial outcomes for businesses (Abrams & Sackman, 2013).

Social Media

Social media is a networking platform that engages Internet users. Boyd and Ellison (2008) describe social networking sites as:

> Web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system (p. 210).

Social networking sites have evolved greatly since the beginning of their use in 1997. Boyd and Ellison (2009) reviewed the history of social networking and determined SixDegrees.com was the first social networking site. Although other websites had previously allowed different components of the social networking site to be created, such as creating a personal profile, SixDegress.com was the first to combine all three characteristics: personal profile, list of friends, and the ability to develop a personal network (Boyd & Ellison). From 1997 to 2001, a few emerging websites had similar characteristics of social networking sites, such as AsianAvenue, BlackPlanet, MiGente, LiveJournal, and Cyworld. However, these sites were not that impactful. In 2001, the next generation of social networking sites emerged. These included Ryze, Tribe.net, LinkedIn, and Friendster. Three sites deserve credit for developing social media as we know it today: Friendster, MySpace, and Facebook. Kaplan and Haenlein (2010) credit the availability of high-speed Internet access as leading to the growth of MySpace and Facebook.

The growing use of social networking sites has been attributed to the voice and recognition users feel they receive through these sites (Brogan, 2010). Today, Internet users between the age of 18 and 32 are using the Internet as a communication tool to interact with family and friends (Jones & Fox, 2009). This is part of the participatory culture of social networking users. This culture engages users and gives them the feeling that their contribution to the site matters. Additionally, users feel a sense of connection with others (Mazali, 2011). These connections offer a platform for users to advocate for issues of importance to them.

Pinterest

One popular social networking site is Pinterest. The "virtual pinboard" website continues to experience rapid growth. Since its launch in March 2010, the social networking website has grown to 70 million users (Smith, 2013). Men and women of all ages use the site; however, it is estimated 82% of the active users on Pinterest are female (Finch, 2012).

As with any social media website, Pinterest gives users an opportunity to create a sense of community by connecting individuals with both people they already know as well as people who share similar interests (Sundar, 2012). The ability to repin or like other pins on Pinterest increases the number of potential connections individuals have (Sundar). With more than 500,000 businesses on Pinterest, businesses also take advantage of the power of Pinterest to connect with consumers (Smith, 2013). Because the content of a pin can take a user anywhere, the amount of knowledge access a user seeks is increased (Sundar). This provides businesses with the opportunity to create pins to take users to important information, which allows businesses to be very intentional with information pinned.

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With its combination of social and collecting capabilities, Zaro and Hall (2012) refer to Pinterest as a "social collecting" website. The ability to share images provides users a sense of ownership (Schiele & Hughes, 2013). Exploratory research by Schiele and Hughes (2013) defines the way Pinterest users collect, organize, and categorize images they find. This research identified a framework of four primary possession rituals: claiming, storing and hoarding, personalizing, and sharing collections (Schiele & Hughes).

Schiele and Hughes (2013) discovered consumers spend a significant amount of time on image-sharing sites, such as Pinterest. Much of the time consumers spend on these sites is spent creating personal collections and utilizing possession rituals (Schiele & Hughes). According to Schiele and Hughes (2013), claiming involved Pinterest users asserting they own the images they pin; personalizing was demonstrated by pinners reformatting images they have collected and placing them in a larger collection; storing and hoarding was described as the excessive collection of images; and sharing was characterized as the way in which users wanted to be perceived by others. These four possession rituals are helpful for businesses because it allows them to better understand how users view content on Pinterest. With a growing number of businesses and organizations taking an active role on social media, it is important to understand how these entities are represented.

Purpose and Objectives

While Pinterest has been researched on an individual level, a gap in knowledge exists related to how businesses and organizations use Pinterest. Specifically, little is known about how agricultural sectors use Pinterest on behalf of businesses and organizations. The purpose of this study was to determine how agribusinesses and agricultural organizations use the social media website Pinterest. Additionally, the study aimed to identify recommendations for agribusinesses and agricultural organizations interested in utilizing Pinterest for businesses or organizations. The following research objectives guided this study:

1. Determine the number of agricultural businesses and organizations using Pinterest.
2. Determine the most represented segment of the agricultural industry on Pinterest.
3. Identify what possession rituals are most prominently utilized by agribusinesses and agricultural organizations on Pinterest.

Methods
Design of the Study

This study used a quantitative content analysis to determine how agribusinesses and agricultural organizations use Pinterest. To create the study sample, researchers conducted a series of searches on Pinterest. A list of agricultural commodities and products was obtained from the Agricultural Marketing Resource Center, which is a group of cooperating universities operating under the U.S. Department of Agriculture's Rural Development grant. A total of 135 commodities and products were included on the list, which was divided among eight categories. These categories included nuts, specialty crops, vegetables, fiber, fruits, grains and oilseeds, livestock, and aquaculture.

The list of commodities and products was divided among the three researchers. The researchers entered the commodity or product names in the Pinterest search box and selected pinners for inclusion in the study sample based off the search results. Producers, businesses, or organizations who turned up in the search were added to the sample on the condition they had a connection to agriculture. The research team came to a consensus that a connection to agriculture would mean the pin-

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ner was involved in producing, processing, transporting, marketing, or promoting a raw agricultural commodity or product. To determine if pinners met these conditions, researchers considered the pinner's name and read the description of the Pinterest account. However, due to the complex nature of the agricultural industry, retailers and restaurants were excluded from the sample. For this study, the researchers wanted to focus on producers of raw commodities or products as well as businesses or organizations who promoted a particular commodity, product, or livestock. At this time, researchers also collected initial information on pinners, such as name, Pinterest url, number of boards, number of pins, and number of followers.

A codebook and codesheet were developed to determine a variety of factors for each pinner. Descriptive information such as name of organization, number of boards, number of pins, and number of followers were coded using numerical values. In addition, pinners were examined for their presence of possession rituals. Possession ritual was divided into four categories: personalizing, storing and hoarding, claiming, and sharing based on Schiele and Hughes' (2013) research.

Based on Schiele and Hughes' (2013) findings and description of the four possession rituals, the researchers came to a consensus on how to assess the presence, or absence, quantitatively of the four possession rituals on individual Pinterest accounts. For this study, claiming was demonstrated when individual pins on a Pinterest account led users to the representing organizations' website, blog, or social media site. A business or organization that had a profile picture, description, or links to its blog, website, or social media on its account was said to exhibit personalizing. Storing and hoarding was present when individual pins led users to sites not associated with the representing business or organization's website, blog, or social media. Finally, sharing was evident when individual pins had be re-pinned by other users.

The codebook was reviewed by a panel of experts for face content and validity. Three coders were trained to use the codebook and codesheet. Coders were trained using the codebook on two Pinterest accounts that were not included in the study sample. After initial training, a random sample of 10% (*n* = 42) of the sample population was coded to determine intercoder reliability. All coding for the initial 10% was conducted during the same 24-hour time period to reduce the chance that additional pins or boards were being created, which would have altered the coding results.

Cohen's Kappa was used to determine intercoder reliability. A score of .825 was obtained between coders 1 and 2. A score of .764 was obtained between coders 1 and 3, and a score of .762 between coders 2 and 3. The overall intercoder reliability was .762, which indicated an acceptable level of agreement among all three coders. These scores were well above the lowest accepted level of reliability of .40 for Cohen's Kappa (Landis & Koch, 1977).

To ensure a strong interrater reliability, all three coders proceeded to code another 10% (*n* = 42). Following the coding of the final 10%, the initial 10% was grouped with the additional 10% for a total overlap of content at 20% (*n* = 84) of the sample. Cohen's Kappa was again used to determine intercoder reliability. A score of .825 was obtained between coders 1 and 2, .764 between coders 1 and 3, and .762 between coders 2 and 3. An overall interrater reliability of .762 was obtained, which indicated an acceptable level of agreement among all three coders.

Following these results, the remaining Pinterest accounts were divided among the three researchers and the rest of the content was coded. Data were analyzed using the Statistical Package for the Social Sciences 20 (SPSS) to obtain descriptive statistics and make comparisons between Pinterest accounts.

Results

Objective 1. Determine the number of businesses and organizations using Pinterest.

As part of this content analysis, a total of 428 Pinterest accounts were analyzed. Of the total, 59.1% (n = 253) represented local farmers, ranchers, or other producers of agricultural products. Sixteen-point-four percent (n = 70) of the Pinterest accounts represented state-level livestock or commodity organizations. An additional 13.1% (n = 56) were accounts representing national-level livestock or commodity organizations. The remaining 11.4% (n = 49) did not fit in any of these three categories based strictly off of their account name and account description and were coded as none of the above. Table 1 shows the frequency of pinners based on the four organization types.

Table 1

Frequency of pinners by organizational type

Organization Type (N = 4)	Frequency (f)	Percent (%)
Local producer	253	59.1
State level	70	16.4
National level	56	13.1
None of the above	49	11.4

Objective 2. Determine what segment of the agricultural industry is represented on Pinterest the most.

In terms of the number of actual pinners, the fiber industry was represented the least. Of the pinners evaluated, 0.9% (n = 4) represented the fiber segment of the agricultural industry. The segment with the greatest number of Pinterest accounts was livestock, and 53.7% (n = 230) of pinners represented this segment. The number of times each segment was represented on Pinterest is shown in Table 2.

Table 2

Number of times each industry segment is represented on Pinterest (N = 428)

Industry Segment (N = 8)	Frequency (f)	Percent (%)
Aquaculture	20	4.7
Fiber	4	0.9
Fruits	29	6.8
Grains and Oilseeds	22	5.1
Livestock	230	53.7
Nuts	20	4.7
Specialty Crops	39	9.1
Vegetables	64	15

In terms of the amount of content generated, the segment of the agricultural industry that had the most pins was livestock with 86,432 pins. The industry with the greatest number of followers was specialty crops, which had 87,872 followers. The fiber industry had the lowest quantity of pins, boards, and followers. The number of pins from all industry segments ranged from 49 to 86,432. The number of boards from all segments ranged from 25 to 2,826. The number of followers from all segments ranged from 228 to 87,872. The total and mean of pins, boards, and followers for each segment is shown in Table 3.

Table 3

Number of pins, boards, and followers for each industry segment

Industry Segment	Number of Pins		Number of Boards		Number of Followers	
	f	Mean	f	Mean	f	Mean
Aquaculture	3679	183.95	156	7.80	1721	86.05
Fiber	49	12.25	25	6.25	228	57.00
Fruits	5662	195.24	262	9.03	4255	146.72
Grains and Oilseeds	4915	223.41	228	10.36	2561	116.41
Livestock	86432	377.43	2826	12.29	60048	262.22
Nuts	3982	199.10	184	9.2	2090	104.50
Specialty Crops	15290	392.05	505	12.95	87872	2253.13
Vegetables	18549	289.83	777	12.14	14980	234.06

Objective 3: Identify what possession rituals are most prominently utilized by agribusinesses and agricultural organizations on Pinterest.

Of the 428 pinners evaluated, 427 exhibited the personalizing possession ritual to some degree (exhibited this ritual at least once), making it the most utilized possession ritual. A total of 344 pinners exhibited storing and hoarding. Three-hundred-twenty-seven pinners exhibited the claiming possession ritual. The possession ritual least utilized by agribusinesses in this study was sharing, which was exhibited by 324 pinners. Table 4 shows the possession rituals used by each industry segment.

Table 4

Possession rituals used by each industry segment

Industry Segment	Possession Ritual			
	Personalizing (N = 426)	Sharing (N = 324)	Claiming (N = 327)	Storing and Hoarding (N = 344)
Aquaculture (n = 20)	20(n), 100%	17(n), 85%	17(n), 85%	14(n), 70%
Fiber (n = 4)	4(n), 100%	3(n), 75%	3(n), 75%	4(n), 100%
Fruits (n = 29)	29(n), 100%	23(n), 79.3%	23(n), 79.3%	26(n), 89.6%
Grains & Oilseeds (n = 22)	22 (n), 100%	17(n), 77.3%	13(n), 59.1%	16(n), 72.7%
Livestock (n = 230)	228(n), 99.1%	176(n), 76.5%	175(n), 76.4%	185(n), 80.5%
Nuts (n = 20)	20(n), 100%	14(n), 70%	15(n), 75%	18(n), 90%
Specialty Crops (n = 39)	39(n), 100%	26(n), 66.7%	31(n), 79.5%	29(n), 74.4%
Vegetables (n = 64)	64(n), 100%	48(n), 75%	50(n), 78.1%	52(n), 81.3%

Conclusions

The results of this study indicate the agricultural industry actively uses Pinterest. However, considerable differences exist in the degree of use, possession rituals utilized, and volume of pins generated between agricultural industry segments and between the individuals within those segments. Local farmers, producers, and ranchers were the most active participants on Pinterest, accounting for more than half of all businesses evaluated in this study. This aligns with previous work that suggests local producers are indeed seeking to implement online advocacy campaigns to further their farms and avoid putting their organization and industry at a disadvantage (Meyers et al., 2011).

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Analysis of Pinterest accounts revealed personalizing was the most prominently exhibited possession ritual across all industry segments. The use of personalizing by all pinners showed value is placed on adding additional content to the business or organizations' Pinterest account. This possession ritual is also the easiest to complete, part of the account creation process, and requires no additional effort once initially set up. This could explain why even passive accounts that did not display any of the other possession rituals still exhibited personalization.

Claiming was the next lowest possession ritual utilized by pinners. The void of claiming pins could demonstrate a lack of desire to inform the user where the pin originated. An alternative explanation could be agriculture's use of Pinterest as an effective marketing tool is still in its infancy. Since many of the accounts were created by local farmers and producers who may not have marketing backgrounds, a general lack of knowledge in using social media to market their products or socially advocate exists that could be remedied through education and training. Researchers recommend developing training programs to help agriculturists use Pinterest effectively.

Storing and hoarding was exhibited by a majority of pinners. This demonstrates that, in addition to creating original content, agricultural pinners use a variety of other sources to share their story with the public. While this behavior does not have as many implications for building a business's brand or name with its target audience, it may help a business or organization advocate on behalf of its industry or product. Storing and hoarding behavior can be time consuming and may not be effective as a stand-alone strategy because the organization or business is not directly claiming this content. However, when it is combined with other possession rituals, it may create a quality experience for the end user.

Although the livestock industry represented more than half of all businesses represented in this study and created the most pins, they did not have a large number of followers. The specialty crops segment averaged the most pins and boards per user and enjoyed the greatest following of any other industry segment. However, the specialty crops market segment had the fewest pinners exhibiting sharing. This indicates the specialty crops industry excels at actively posting material and reaching the greatest number of followers when compared to other segments, but the gathered users remain passive in sharing the uploaded content. In other words, although the specialty crops industry is seen by the greatest number of people, their content is not as effective in generating conversation by re-pinning the content. Moreover, this research provides support for Schiele and Hughes (2013) definitions of possession rituals and indicates these rituals are indeed transferable to agricultural businesses and organizations on Pinterest.

Implications

This study provided introductory explanations to the current efforts of agricultural digital advocates on Pinterest and characterized the methods in which producers and organizations use this collection by means of possession rituals. Pinterest is a rapidly growing social network. This study provides additional support for previous social media studies that indicate farmers and ranchers who are not taking advantage of social media's ability to reach a large number of users with online advocacy campaigns in addition to their local efforts put their organization and industry at a disadvantage (Meyers et al., 2011). However, if producers and organizations are going to use Pinterest to advocate and market products and commodities, they must understand what possession rituals are successful in generating an engaged target audience. Furthermore, by identifying which market segment is most successful on Pinterest, we can begin to identify successful strategies and best practices to implement for other producers and organizations.

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Recommendations For Future Research

One primary limitation in this study is the selection of agribusinesses, agricultural organizations, and producers. Future research should include retailers, restaurants who serve fresh produce, and additional processors. Another limitation in this study was search terms used to create the study sample. To create the sample for this study, the researchers used a list of 135 commodities and products; however, the researchers realize various products directly related to agriculture were not included on the list.

Future research should expand upon the current list to gain more accurate representation of the entire agricultural industry. Including general terms such as agriculture, farming, and ranching as well as other common agricultural identifiers could create a more heterogeneous sample that accurately reflects the current state of the industry. Future studies should also develop a scale to rate the presence and degree of each possession ritual to provide a more accurate portrayal of the possession rituals observed. This study only analyzed content from a public view. Future research should consider analyzing the perceptions of rituals content by the end user. Future studies should seek to identify a correlation between the possession rituals and active participation of readership (followers, shares, and comments). Lastly, this study did not seek to identify the presence or effectiveness of promoted pins. Future research should seek to determine the impacts of promoted pins.

Recommendations For Practitioners

Agricultural businesses and organizations seeking to utilize Pinterest to promote their business and/or advocate for their industry should consider implementing the possession rituals of claiming, storing and hoarding, personalizing, and sharing as defined by Schiele and Hughes (2013). These rituals align with how users of Pinterest are consuming content, which should allow for a more palatable transfer of information from business and organization to the intended audience. As Pinterest grows in popularity, it is advantageous for agricultural businesses and organizations to explore its use in overall marketing and promotion strategies. Pinterest offers the opportunity for businesses and organizations to make themselves more visual, which may help consumers connect to the agricultural industry.

References

Abrams, K. M., & Sackmann, A. (2013, August). Are alternative farmers yielding success with online communication tools for their social capital and business viability? In: *Proceedings of Association for Education in Journalism and Mass Communication Conference, Communication Technology Division*, Washington, D.C.

Boyd, D.M., & Ellison, N.B. (2008). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, *13*(1), 210-230. doi:10.1111/j.1083-6101.2007.00393.x

Brogan, C. (2010). Tactics and tips to develop your business online. Hoboken, New Jersey: John Wiley & Sons, Inc.

Finch, C. (2012). How Pinterest's female audience is changing social marketing. Retrieved from http://mashable.com/2012/02/28/pinterest-women-marketing/

Fox, S & Jones, S. (2009). The social life of health information: American's pursuit of health takes place within a widening network of both online and offline sources. Washington, D.C.: Pew Internet & American Life Project.

Research

Graybill-Leonard, M., Meyers, C., Doerfert, D., & Irlbeck, E. (2011) Using Facebook as a communication tool in agricultural-related social movements. *Journal of Applied Communications*, 95(3), 45-56.

Hall, C., & Zarro, M. (2012). Social curation on the website pinterest.com. *Proceedings of the ASIST Annual Meeting, 49*(1). Retrieved from www.scopus.com

Holt-Gimenez, E., (2010). Grassroot voices: Linking farmers' movements for advocacy and practice. *The Journal of Peasant Studies, 37*(1), 203-236. Retrieved from www.uvm.edu

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons, 53*, 59-68 doi:10.1016/j.bushor.2009.09.003

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 159-174.

Mazali, T. (2010). Social media as a new public sphere. *Leonardo, 44*(3), 290-291

Meyers, C., Irlbeck, E., Graybill-Leonard, M., & Doerfert, D. (2011). Advocacy in agricultural social movements: Exploring Facebook as a public relations communication tool. *Journal of Applied Communications, 95(3), 68-81.*

Ruth-McSwain, A., & Telg, R. (2008). To bother or not to bother? Media relationship development strategies of agricultural communication professionals. *Journal of Applied Communications, 92(3).*

Schiele, K., & Hughes, M. Ü. (2013). Possession rituals of the digital consumer: A study of Pinterest. Retrieved from http://mineucokhughes.com/wp-content/uploads/2013/06/EACR_2013_fullpaperFINAL.pdf

Smith, C. (2013). By the numbers: 23 amazing Pinterest stats. Retrieved from http://expandedramblings.com/index.php/pinterest-stats/

Sundar, A. (2012). Insider: Next wave of social networking – integrating visual thinking in the home-buying process. Retrieved from http://www.baylor.edu/business/kellercenter/news.php?action=story&story=126259

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